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(Original Signature of Member)

111TH CONGRESS
2^D SESSION

H. R. 5716

To provide for enhancement of existing efforts in support of research, development, demonstration, and commercial application activities to advance technologies for the safe and environmentally responsible exploration, development, and production of oil and natural gas resources.

IN THE HOUSE OF REPRESENTATIVES

Mr. Gordon introduced the following bill; which was referred to the
Committee on _____

A BILL

To provide for enhancement of existing efforts in support of research, development, demonstration, and commercial application activities to advance technologies for the safe and environmentally responsible exploration, development, and production of oil and natural gas resources.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Safer Oil and Natural
5 Gas Drilling Technology Research and Development Act".

1 SEC. 2. SUBTITLE AMENDMENT.

2 Subtitle J of title IX of the Energy Policy Act of
3 2005 (42 U.S.C. 16371 et seq.) is amended in the subtitle
4 heading by striking “**Ultra-Deepwater and Uncon-**
5 **ventional Natural Gas and Other Petroleum**
6 **Resources**” and inserting “**Safer Oil and Natural**
7 **Gas Drilling Technology Research and Devel-**
8 **opment Program**”.

9 SEC. 3. SAFER OIL AND NATURAL GAS DRILLING TECH-
10 NOLOGY RESEARCH AND DEVELOPMENT
11 PROGRAM.

12 (a) PROGRAM AUTHORITY.—Section 999A of the En-
13 ergy Policy Act of 2005 (42 U.S.C. 16371) is amended—

14 (1) in subsection (a)—

15 (A) by striking “ultra-deepwater” and in-
16 serting “deepwater”; and

17 (B) by inserting “well control and accident
18 prevention,” after “safe operations,”;

19 (2) in subsection (b)—

20 (A) by inserting “, accident prevention and
21 mitigation,” after “improving safety”;

22 (B) by striking paragraph (1) and insert-
23 ing the following:

24 “(1) Deepwater architecture and technology, in-
25 cluding those for drilling to formations in water
26 depths greater than 1,000 feet.”; and

1 (C) by striking paragraph (4) and insert-
2 ing the following:

3 “(4) Complementary research carried out by
4 the Department.”;

5 (3) in subsection (d)—

6 (A) in the subsection heading, by striking
7 “NATIONAL ENERGY TECHNOLOGY LABORA-
8 TORY” and inserting “DEPARTMENT OF EN-
9 ERGY”; and

10 (B) by striking “National Energy Tech-
11 nology Laboratory” and inserting “Office of
12 Fossil Energy of the Department”; and

13 (4) by adding at the end the following:

14 “(f) PARTNERSHIPS.—In carrying out the program
15 under this subtitle, the Secretary shall seek to establish
16 partnerships with research performers in institutions of
17 higher education and the private sector to undertake re-
18 search and development not likely otherwise to be under-
19 taken in the absence of support from the program.”.

20 (b) PROGRAM ELEMENTS.—Section 999B of the En-
21 ergy Policy Act of 2005 (42 U.S.C. 16372) is amended—

22 (1) in the section heading, by striking “**ULTRA-**
23 **DEEPWATER AND UNCONVENTIONAL ONSHORE**
24 **NATURAL GAS AND OTHER PETROLEUM**” and

1 inserting “**SAFER OIL AND NATURAL GAS DRILL-**
2 **ING TECHNOLOGY**”;

3 (2) by amending subsection (a) to read as fol-
4 lows:

5 “(a) IN GENERAL.—The Secretary shall carry out
6 the activities under section 999A to maximize the benefits
7 of natural gas and other petroleum resources of the
8 United States by advancing the safe and environmentally
9 responsible exploration, development, and production of
10 those resources.”;

11 (3) in subsection (c)(1)—

12 (A) by redesignating subparagraphs (D)
13 and (E) as subparagraphs (E) and (F), respec-
14 tively; and

15 (B) by inserting after subparagraph (C)
16 the following:

17 “(D) select projects on a competitive
18 basis;”;

19 (4) in subsection (d)—

20 (A) in paragraph (6), by striking “ultra-
21 deepwater” and inserting “deepwater”; and

22 (B) by striking paragraph (7) and insert-
23 ing the following:

24 “(7) FOCUS AREAS FOR AWARDS.—

1 “(A) DEEPWATER RESOURCES.—Awards
2 from allocations under section 999H(d)(1) shall
3 focus on research, development, demonstration,
4 and commercial application activities in areas
5 that include—

6 “(i) technologies and systems aimed
7 at improving operational safety and reduc-
8 ing potential environmental impacts of
9 deepwater exploration and production ac-
10 tivities, including—

11 “(I) wellbore integrity, well con-
12 trol, and blowout prevention;

13 “(II) capture and containment of
14 oil at or near the wellhead; and

15 “(III) expanding operational ca-
16 pabilities and efficiency of remotely
17 operated devices and mechanics;

18 “(ii) safe and environmentally respon-
19 sible deepwater exploration and production
20 technologies, integrated systems, and ar-
21 chitectures for enhancing oil and natural
22 gas drilling and recovery, including under
23 extreme conditions;

1 “(iii) methods and technologies for se-
2 vere weather and ocean surface condition
3 preparedness; and

4 “(iv) other areas as determined appro-
5 priate by the Secretary.

6 “(B) UNCONVENTIONAL ONSHORE RE-
7 SOURCES.—Awards from allocations under sec-
8 tion 999H(d)(2) shall focus on research, devel-
9 opment, demonstration, and commercial appli-
10 cation activities in areas that include—

11 “(i) advanced coalbed methane, deep
12 drilling, natural gas production from tight
13 sands, natural gas production from gas
14 shales, stranded gas, innovative exploration
15 and production techniques, and enhanced
16 recovery techniques;

17 “(ii) increased efficiency of energy use
18 in exploration and production activities;

19 “(iii) recovery, utilization, reduction,
20 and improved management of produced
21 water from exploration and production ac-
22 tivities; and

23 “(iv) accident prevention and environ-
24 mental mitigation of unconventional nat-

1 ural gas and other petroleum resources ex-
2 ploration and production.

3 “(C) SMALL PRODUCERS.—Awards from
4 allocations under section 999H(d)(3) shall be
5 made to consortia consisting of small producers
6 or organized primarily for the benefit of small
7 producers, and shall focus on areas that in-
8 clude—

9 “(i) safety and accident prevention,
10 environmental mitigation, waste reduction,
11 reduction of energy use, and well control
12 and systems integrity;

13 “(ii) complex geology involving rapid
14 changes in the type and quality of the oil
15 and gas reserves across the reservoir;

16 “(iii) low reservoir pressure and un-
17 conventional natural gas reservoirs in coal-
18 beds, deep reservoirs, tight sands, or
19 shales; and

20 “(iv) advancing energy efficient, safe,
21 and environmentally responsible production
22 of unconventional oil reservoirs in tar
23 sands and oil shales.

24 “(D) SAFETY, ACCIDENT PREVENTION,
25 AND MITIGATION TECHNOLOGY RESEARCH AND

1 DEVELOPMENT BY THE DEPARTMENT.—Awards
2 from allocations under section 999H(d)(4) shall
3 focus on safety, accident prevention, and miti-
4 gation research, development, demonstration,
5 and commercial application activities in areas
6 that may include—

7 “(i) improved technologies and best
8 management practices for enhanced well
9 integrity including—

10 “(I) cementing;

11 “(II) casing;

12 “(III) wellbore sealant tech-
13 nologies;

14 “(IV) well-plugging and abandon-
15 ment;

16 “(V) improvement and standard-
17 ization of blowout prevention devices;

18 “(VI) actuation and pressure
19 testing; and

20 “(VII) other well control activi-
21 ties;

22 “(ii) research to aid in the develop-
23 ment of industry best practices and stand-
24 ards for workforce training;

1 “(iii) secondary control systems to ac-
2 tivate blowout prevention devices and ter-
3 minate well-flow, including—

4 “(I) deadman switches;

5 “(II) automatic shears; and

6 “(III) remote acoustic switches;

7 “(iv) technologies and methods for ac-
8 cident mitigation, including—

9 “(I) capture, containment, or dis-
10 persing of oil at or near the wellhead;

11 “(II) estimating flow rate;

12 “(III) diagnostic sensors to de-
13 termine equipment malfunction; and

14 “(IV) procedures to terminate
15 flow;

16 “(v) continuing ongoing efforts, in-
17 cluding in resource assessment and charac-
18 terization, and in simulation of safe and
19 effective drilling under extreme conditions,
20 including high temperatures and pressures;
21 and

22 “(vi) other activities as described in
23 this paragraph or as determined appro-
24 priate by the Secretary.”;

25 (5) in subsection (e)—

1 (A) in paragraph (2)—

2 (i) in the second sentence of subpara-
3 graph (A), by inserting “to the Secretary
4 for review” after “submit”; and

5 (ii) in the first sentence of subpara-
6 graph (B), by striking “Ultra-Deepwater”
7 and all that follows through “and such Ad-
8 visory Committees” and inserting “Pro-
9 gram Advisory Committee established
10 under section 999D(a), and the Advisory
11 Committee”; and

12 (B) by adding at the end the following:

13 “(6) RESEARCH FINDINGS AND RECOMMENDA-
14 TIONS FOR IMPLEMENTATION.—The Secretary shall
15 publish in the Federal Register an annual report on
16 the research findings of the program carried out
17 under this section and any recommendations for im-
18 plementation that the Secretary determines to be
19 necessary.”;

20 (6) in subsection (i)—

21 (A) in the subsection heading, by striking
22 “UNITED STATES GEOLOGICAL SURVEY” and
23 inserting “DEPARTMENT OF THE INTERIOR”;
24 and

1 (B) by striking “, through the United
2 States Geological Survey,”; and
3 (7) in subsection (j), by striking “National En-
4 ergy Technology Laboratory” and inserting “Office
5 of Fossil Energy of the Department”.

6 **SEC. 4. PROGRAM ADVISORY COMMITTEE.**

7 Section 999D of the Energy Policy Act of 2005 (42
8 U.S.C. 16374) is amended to read as follows:

9 **“SEC. 999D. PROGRAM ADVISORY COMMITTEE.**

10 “(a) ESTABLISHMENT.—Not later than 90 days after
11 the date of enactment of the Safer Oil and Natural Gas
12 Drilling Technology Research and Development Act, the
13 Secretary shall establish an advisory committee to be
14 known as the ‘Program Advisory Committee’ (referred to
15 in this section as the ‘Advisory Committee’).

16 “(b) MEMBERSHIP.—

17 “(1) IN GENERAL.—The Advisory Committee
18 shall be composed of members appointed by the Sec-
19 retary, including—

20 “(A) individuals with extensive research
21 experience or operational knowledge of oil and
22 natural gas exploration and production;

23 “(B) individuals broadly representative of
24 the affected interests in oil and natural gas pro-

1 duction, including interests in environmental
2 protection and operational safety;

3 “(C) State regulatory agency representa-
4 tives; and

5 “(D) other individuals, as determined by
6 the Secretary.

7 “(2) LIMITATIONS.—

8 “(A) IN GENERAL.—The Advisory Com-
9 mittee shall not include individuals who are
10 board members, officers, or employees of the
11 program consortium.

12 “(B) CATEGORICAL REPRESENTATION.—In
13 appointing members of the Advisory Committee,
14 the Secretary shall ensure that no class of indi-
15 viduals described in any of subparagraphs (B),
16 (C), or (D) of paragraph (1) comprises more
17 than 1/3 of the membership of the Advisory
18 Committee.

19 “(c) SUBCOMMITTEES.—The Advisory Committee
20 may establish subcommittees or ad hoc working groups for
21 the research focus areas described in section 999B(d)(7).

22 “(d) DUTIES.—The Advisory Committee shall—

23 “(1) advise the Secretary on the development
24 and implementation of programs under this subtitle;
25 and

1 “(2) carry out section 999B(e)(2)(B).

2 “(e) COMPENSATION.—A member of the Advisory
3 Committee shall serve without compensation but shall be
4 entitled to receive travel expenses in accordance with sub-
5 chapter I of chapter 57 of title 5, United States Code.

6 “(f) PROHIBITION.—The Advisory Committee shall
7 not make recommendations on funding awards to par-
8 ticular consortia or other entities, or for specific
9 projects.”.

10 **SEC. 5. DEFINITIONS.**

11 Section 999G of the Energy Policy Act of 2005 (42
12 U.S.C. 16377) is amended—

13 (1) in paragraph (1), by striking “200 but less
14 than 1,500 meters” and inserting “1,000 feet”;

15 (2) by striking paragraphs (8), (9), and (10);

16 (3) by redesignating paragraphs (2) through
17 (7) and (11) as paragraphs (4) through (9) and
18 (10), respectively; and

19 (4) by inserting after paragraph (1) the fol-
20 lowing:

21 “(2) DEEPWATER ARCHITECTURE.—The term
22 ‘deepwater architecture’ means the integration of
23 technologies for the safe and environmentally re-
24 sponsible exploration for, or production of, natural

1 gas or other petroleum resources located at deep-
2 water depths.

3 “(3) DEEPWATER TECHNOLOGY.—The term
4 ‘deepwater technology’ means a discrete technology
5 that is specially suited to address 1 or more chal-
6 lenges associated with the safe and environmentally
7 responsible exploration for, or production of, natural
8 gas or other petroleum resources located at deep-
9 water depths.”.

10 **SEC. 6. FUNDING.**

11 Section 999H of the Energy Policy Act of 2005 (42
12 U.S.C. 16378) is amended—

13 (1) in the first sentence of subsection (a) by
14 striking “Ultra-Deepwater and Unconventional Nat-
15 ural Gas and Other Petroleum Research Fund” and
16 inserting “Safer Oil and Natural Gas Drilling Tech-
17 nology Research and Development Fund”;

18 (2) in subsection (d)—

19 (A) in paragraph (1), by striking “35 per-
20 cent” and inserting “32.5 percent”;

21 (B) in paragraph (2), by striking “32.5
22 percent” and inserting “25 percent”; and

23 (C) in paragraph (4)—

24 (i) by striking “25 percent” and in-
25 serting “35 percent”; and

1 (ii) by striking “contract manage-
2 ment,” and all that follows through the pe-
3 riod at the end and inserting “and contract
4 management.”; and

5 (3) in subsection (f), by striking “Ultra-Deep-
6 water and Unconventional Natural Gas and Other
7 Petroleum Research Fund” and inserting “Safer Oil
8 and Natural Gas Drilling Technology Research and
9 Development Fund”.

10 **SEC. 7. CONFORMING AMENDMENTS.**

11 The table of contents of the Energy Policy Act of
12 2005 is amended—

13 (1) by amending the item relating to subtitle J
14 of title IX to read as follows:

“Subtitle J—Safer Oil and Natural Gas Drilling Technology Research and De-
velopment Program”;

15 (2) by amending the item relating to section
16 999B to read as follows:

“Sec. 999B. Safer Oil and Natural Gas Drilling Technology Research and De-
velopment Program.”; and

17 (3) by amending the item relating to section
18 999D to read as follows:

“Sec. 999D. Program Advisory Committee.”.

AMENDMENT

OFFERED BY MR. GORDON

Page 3, lines 16 and 17, strike “research performers in institutions of higher education and the private sector” and insert “eligible research performers, as described by section 999E,”.

Page 4, after line 18, insert the following new paragraph, and redesignate the subsequent paragraphs accordingly:

- 1 (4) in subsection (c)(3)(ii), by striking “under
2 subsection (f)(4)”;

Page 7, line 24, strike “ACCIDENT PREVENTION, AND MITIGATION” and insert “AND ACCIDENT PREVENTION AND MITIGATION,”.

Page 8, line 3, strike “accident prevention, and mitigation” and insert “and accident prevention and mitigation,”.

Page 8, lines 22 through 24, amend clause (ii) to read as follows:

- 3 “(ii) research to aid in the develop-
4 ment of industry best practices and stand-

1 ards for workforce training, design of safe
2 workplace environments, and safety related
3 decisionmaking processes, including by
4 drawing on existing research into human
5 factors and safety related practices in
6 fields such as the nuclear energy, aviation,
7 and automotive industries;

Page 9, line 21, strike “; and” and insert a semi-colon.

Page 9, after line 21, insert the following new clause, and redesignate the subsequent clause accordingly:

8 “(vi) development of methodologies
9 for risk management decisionmaking, in-
10 cluding comparative risk analysis and
11 quantitative risk assessment of potential
12 for failure in the technologies, management
13 practices, and systems studies under this
14 subsection; and

Page 11, line 19, strike “including” and insert “each of whom shall be qualified by education, training, and experience to evaluate scientific and technical information relevant to the research, development, and demonstration under this subtitle. Members shall include”.

Page 15, line 4, strike “and”.

Page 15, line 9, strike the period at the end of the paragraph (3) and insert “; and”.

Page 15, after line 9 insert the following new paragraph:

1 (4) at the end of the section, by inserting the
2 following new subsection:
3 “(g) COORDINATION AND NONDUPLICATION.—The
4 Secretary shall ensure, to the maximum extent practicable,
5 that the research activities carried out by the consortium
6 funded under paragraphs (1), (2), and (3) of subsection
7 (d), and the research activities carried out by the Depart-
8 ment of Energy as funded by subsection (d)(4), shall be
9 coordinated and not duplicative of one another.”.



AMENDMENT

OFFERED BY Mr. Garamendi

Page 3, after line 12, insert the following new paragraph:

- 1 (4) in subsection (e)—
- 2 (A) in the subsection heading, by striking
- 3 "SECRETARY OF THE INTERIOR"; and insert-
- 4 ing "OTHER FEDERAL AGENCIES"; and
- 5 (B) by inserting "and other agencies as
- 6 appropriate, including those serving on, and col-
- 7 laborating with, the Interagency Coordinating
- 8 Committee on Oil Pollution Research as estab-
- 9 lished under section 7001 of the Oil Pollution
- 10 Act of 1990 (33 U.S.C. 2761(a))" after "Sec-
- 11 retary of the Interior"; and



AMENDMENT

OFFERED BY Mr. McCaul

Page 6, line 3, strike "and".

Page 6, after line 3, insert the following new clause,
and redesignate the subsequent clause accordingly:

1 “(iv) utilization of exploration and
2 production methods and materials that re-
3 duce the potential impact of such activities
4 on the environment; and

Page 6, after line 18, insert the following new
clause, and redesignate the subsequent clauses accord-
ingly:

5 “(iii) utilization of exploration and
6 production methods and materials that re-
7 duce the potential impact of such activities
8 on the environment;

Page 6, lines 23 and 24, strike “environmental”.



AMENDMENT

OFFERED BY Mr. Inglis

Page 10, line 11, strike "and".

Page 10, after line 11, insert the following new subparagraph, and redesignate the subsequent subparagraph accordingly:

- 1 (B) in paragraph (4)—
- 2 (i) by striking "and" at the end of
- 3 subparagraph (A);
- 4 (ii) by striking the period at the end
- 5 of subparagraph (B) and inserting ";
- 6 and"; and
- 7 (iii) by adding at the end the fol-
- 8 lowing new subparagraph:
- 9 "(C) a summary of ongoing and planned
- 10 activities aimed at improving operational safety
- 11 and reducing potential environmental impacts
- 12 of exploration and production."



AMENDMENT

OFFERED BY Mr. Inglis

Page 10, after line 19, insert the following new paragraph, and redesignate the subsequent paragraphs accordingly:

- 1 (6) in subsection (f)(2), by inserting "In car-
- 2 rying out this subsection, the Secretary shall ensure
- 3 that safety and accident prevention and mitigation
- 4 be regularly included as specific focus areas for so-
- 5 licitations." after "consortium.";

